CLAIMS

1. A method of assembling a dual inductor (1) on a printed circuit board (PCB) (2) comprising:-

forming a through hole (3) in the PCB (2);

mounting a first winding (5, 25) across the hole (3);

securing the first winding (5, 26) to a first face (7) of the PCB (2);

inserting a core assembly (10) into the hole (3) from the direction of the second face (8) of the PCB (2); and

at some stage in the assembly, mounting a second winding (6) on the core assembly (10).

2. A method as claimed in claim 1, in which the second winding (6) is secured to the second face (8) of the PCB (2).

3. A method as claimed in claim 1 or 2, in which the hole (3) is so formed that one or both of the windings (5, 6 and 25, 26) rest on the respective face (7, 8).

4. A method as claimed in any preceding claim comprising:-

mounting an inductive element (30) in close proximity to the first and second windings (25, 26); and

connecting the inductive element (30) through a capacitive element (47) to provide a ripple current cancelling signal for the dual inductor (1).

5. A method as claimed in claim 4, in which when the dual inductor (1) forms

part of a power converter circuit (40), the inductive element (30) and capacitive element (47) are connected between the input and output grounds of the power converter circuit (40).

6. A method as claimed in any preceding claim, in which each of the windings is so configured that the input and output are in close proximity.

7. A method as claimed in any preceding claim, in which at least one of the windings (5, 6 and 25, 26) is formed by metal stamping.

8. A method as claimed in any of claims 1 to 6, in which at least one of the windings (5, 6 and 25, 26) is formed by a PCB section.

9. A dual inductor (1) comprising:-

a core assembly (10) formed from a central plate (11) and a set of three parallel spaced-apart legs, namely an inner leg (12) and outer legs (13) on opposed faces (14) of the central plate (11) forming first and second cores (15, 16); and

a first and second winding (5, 6 and 25, 26) on the inner leg (12) of each of the first and second cores (15, 16), in which at least one of the windings (25, 26) extends outside one of the outer legs (13) to provide additional inductance.

10. A dual inductor (1) as claimed in claim 9, in which the input and output of each set of windings (5, 6 and 25, 26) are in close proximity.

11. A dual inductor (1) as claimed in claim 9 or 10, comprising:-

a separate inductive element (30) in close proximity to the windings (25, 26); and

a capacitive element (47) connected to the inductive element (30), the

output of the capacitive element (47) providing a ripple current cancelling signal.

12. A dual inductor (1) as claimed in claim 11, in which the inductive element (30) is a length of insulated copper wire (31) close to the first and second windings (25, 26).

13. A dual inductor (1) as claimed in any of claims 9 to 12, in which at least one of the windings (5, 6 and 25, 26) is formed from a metal stamping.

14. A dual inductor (1) as claimed in claim 9 or 10 and 13, in which the stamping (25, 26) is recessed to receive a PCB section forming the inductive element (30).

15. A dual inductor (1) as claimed in any of claims 9 to 12, in which each winding (5, 6 and 25, 26) is formed by a PCB section.

16. A dual inductor (1) as claimed in claims 9 or 10 and 15, in which the inductive element (30) is formed by the PCB section.

17. A power converter (40) comprising the dual inductor (1) as claimed in any of claims 9 to 16 inclusive.

18. A PCB (2) comprising the dual inductor (1) as claimed in any of claims 9 to 16 inclusive.

19. A current doubler comprising the dual inductor (1) as claimed in any of claims 9 to 16 inclusive.